Water Words

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Safe water:
Water that does not contain harmful bacteria, toxic materials, or chemicals, and is considered safe for drinking even if it may have taste, odor, color, and certain mineral problems.

Safe yield:
The annual amount of water that can be taken from a source of supply over a period of years without depleting that source beyond its ability to be replenished naturally in "wet years."

Salin-sodic soils:
Soils with both salt and sodium accumulation requiring special management; these soils are common in the San Joaquin Valley.

Salinity:
The percentage of salt in water.

Salt water intrusion:
The invasion of fresh surface or ground water by salt water. It may be called seawater intrusion if it comes from the ocean.

Salts:
Minerals that cause salinity. Water may pick up additional salts as it passes through the air, over and under the ground, or as households and industry use it.

Sand filters:
Devices that remove some suspended solids from effluent. Air and bacteria decompose additional wastes filtering through the sand so that cleaner water drains from the bed.

Sanitary sewers:
1. Underground pipes that carry off only domestic or industrial waste, not storm water. 2. Word synonymous with Publicly Owned Treatment Works.

Sanitary Water:
Water discharged from sinks, showers, kitchens, or other non-industrial operations, but not from toilets. It is also known as gray water.

Saturated zone:
The area below the water table where all open spaces are filled with water under pressure equal to or greater than that of the atmosphere.

Saturation:
The condition of a liquid when it has taken into solution the maximum possible quantity of a given substance at a given temperature and pressure.

Schedule of compliance:
A schedule of remedial measures included in an NPDES permit that includes an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

Sedimentation:
Letting solids settle out of wastewater by gravity during treatment.

Sedimentation tanks:
Wastewater tanks in which floating wastes are skimmed off and settled solids are removed for disposal.

Sediments:
Soil, sand, and minerals washed from land into water, usually after rain. They can pile up in reservoirs, rivers and harbors, destroying fish and wildlife habitat, and clouding the water so that sunlight cannot reach aquatic plants. Without proper management, farming, mining, and building activities exposes sediment materials, allowing them to wash off the land after rainfall.

Seepage:
Percolation of water through the soil from unlined canals, ditches, laterals, watercourses, or water storage facilities.

Selenium:
A natural trace element that is both an essential nutrient in lower concentrations and an element toxic to wildlife in higher concentrations.

Semi-confined aquifer:
An aquifer partially confined by soil layers of low permeability in which recharge and discharge can still occur.

Semi-solid waste:
Waste containing less than 50 percent solids.

Senescence:
The aging process. Sometimes used to describe lakes or other bodies of water in advanced stages of eutrophication. Also used to describe plants and animals.

Septic system:
An on-site system designed to treat and dispose of domestic sewage. A typical septic system consists of a tank that receives waste from a residence or business and a system of tile lines or a pit for disposal of the liquid effluent (sludge) that remains after decomposition of the solids by bacteria in the tank. Must be pumped out periodically. (See also On-site sewage system).

Septic tank:
An underground storage tank for wastes from homes not connected to a sewer line. Waste goes from the home to the tank.

Settleable solids:
Material heavy enough to sink to the bottom of a wastewater treatment tank.

Settling tank:
A holding area for wastewater, where heavier particles sink to the bottom for removal and disposal.

Sewage sludge:
Sludge produced at a Publicly Owned Treatment Works, the disposal of which is regulated under the Clean Water Act.

Sewage:
The waste and wastewater produced by residential and commercial sources and discharged into sewers. (See also Municipal sewage)

Sewage treatment:
Stabilization of municipal wastewater using up to three stages — 1. Primary treatment -- first state which refers to the settling out of large suspended solids by screening and sedimentation before either discharging the treated wastewater or subjecting it to further treatment; 2. Secondary treatment -- additional treatment by biological processes to break down organic matter remaining in the sewage; and 3. Tertiary treatment -- further treatment of sewage beyond the secondary state to accomplish a very high degree of pollution reduction. Typical pollutants removed are suspended solids, organic chemicals, and nutrients.

Typically, primary treatment is physical, secondary treatment is biological and tertiary treatment is chemical.

Sewage treatment plant:
A facility designed to receive wastewater from domestic and industrial or commercial sources and to treat it by removing materials that could damage water quality and threaten public health if they were discharged into receiving streams or bodies of water. (See also Publicly Owned Treatment Works).

Sewer:
A channel or conduit that carries wastewater and storm-water runoff from the source to a treatment plant or receiving stream. "Sanitary" sewers carry household, industrial, and commercial waste. "Storm" sewers carry runoff from rain or snow. "Combined" sewers handle both.

Sewer system:
Water from sinks and toilets flows through a sewer system of pipes and conduits to a wastewater treatment plant where the water is treated before re-entering a waterway.

Sewerage:
The entire system of sewage collection, treatment, and disposal.

Shellfish:
Defined for public health purposes by the Department of Health Services as mussels, clams, and oysters.

Short-circuiting:
When some of the water in tanks or basins flows faster than the rest; short-circuiting may result in shorter contact, reaction, or settling times than calculated or presumed.

Significant municipal facilities:
Publicly owned treatment works that discharge a million gallons per day or more and are have the potential to substantially affect the quality of receiving waters.

Significant potential source of contamination:
A facility or activity that stores, uses, or produces compounds with potential for significant contaminating impact if released into the source water of a public water supply.

Silviculture:
1. The theory and practice of controlling the establishment, composition, and growth of forests. 2. Management of forest land for timber.

Sinking:
Controlling oil spills by using an agent to trap the oil and sink it to the bottom of the body of water where the agent and the oil are biodegraded.

Skimming:
Using a machine to remove oil or scum from the surface of the water.

Sludge:
A solid or semi-solid residue from the treatment of water, wastewater, and other liquids. It does not include liquid effluent discharged from such treatment processes. Sludge can be a hazardous waste. (See also Sewage sludge.)

Sludge digester:
Tank in which complex organic substances like sewage sludge are biologically dredged. Energy is released and much of the sewage is converted to methane, carbon dioxide, and water.

Slurry:
A watery mixture of insoluble matter resulting from some pollution control techniques.

Small Community Grant Program:
Small communities (typically, a community of 20,000 people or less or a reasonably isolated and divisible segment of a larger municipality with no more than 20,000 people) that are eligible under the Small Community Grant Program for funding assistance for construction of treatment works. Grants may apply towards planning, design, and construction for the projects determined by the State Board to be the most effective solution to a water quality or public health problem.

Soft water:
Any water that does not contain a significant amount of dissolved minerals such as salts of calcium or magnesium.

Soil adsorption field:
A subsurface area containing a trench or bed with clean stones and a system of piping through which treated sewage may seep into the surrounding soil for further treatment and disposal.

Soil and water conservation practices:
Control measures consisting of managerial, vegetative, and structural practices to reduce the loss of soil and water.

Soil conditioner:
An organic material like humus or compost that helps soil absorb water, build a bacterial community, and take up mineral nutrients.

Soil erodibility:
An indicator of a soil's susceptibility to raindrop impact, runoff, and other eroding processes.

Soil moisture:
The water contained in the pore space of the unsaturated zone.

Solder:
Metallic compound used to seal joints between pipes. Until recently, most solder contained 50 percent lead. Use of solder containing more than 0.2 percent lead in pipes carrying drinking water is prohibited.

Sole-source aquifer:
An aquifer that supplies 50-percent or more of the drinking water of an area.

Solid waste:
All putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. Solid waste does not include hazardous waste, radioactive waste, or medical waste. (See also Nonhazardous solid waste, Waste).

Solid waste assessment test:
State and regional water board program that oversees solid waste disposal site investigations to determine if there is hazardous waste leaking into the state's waters.

Solidification and stabilization:
Wastewater removal from a waste, changing the waste chemically to make it less permeable and susceptible to transport by water.

Solubility:
The amount of mass of a compound that will dissolve in a unit volume of solution. "Aqueous Solubility" is the maximum concentration of a chemical that will dissolve in pure water at a reference temperature.

Source area:
The zone of highest soil or groundwater concentrations of the chemical of concern. Defined in other contexts to as the location of liquid hydrocarbons.

Source control:
1. Synonymous with waste or pollution reduction. 2. Improved water use efficiency from a reduction in applied water, such as irrigation.

Source-water protection area:
The area delineated by a state for a Public Water Supply or including many such suppliers, whether the source is ground water or surface water or both.

Specific conductance:
Rapid method of estimating the dissolved solid content of a water supply by testing its capacity to carry an electrical current.

Specific yield:
The amount of water a unit volume of saturated permeable rock will yield when drained by gravity.

Spill Prevention, Containment, and Countermeasures Plan:
Plan defined in the *Clean Water Act* that involves the release of hazardous substances.

Spoils:
Loose rock, dirt, solid, or vegetation debris left from construction or mining activities.

Spring:
Ground water seeping out of the earth where the water table intersects the ground surface.

Spring melt/thaw:
The process whereby warm temperatures melt winter snow and ice. Because various forms of acid deposition may have been stored in the

frozen water, the melt can result in abnormally large amounts of acidity entering streams and rivers, sometimes causing fish kills.

Stabilization ponds:
(See Lagoon)

Stagnation:
Lack of motion in water that holds pollutants in place.

Stakeholder:
Any organization, governmental entity, or individual that has a stake in or may be impacted by an official State Board or Regional Board action.

State Mussel Watch Program:
A program developed to monitor toxic pollutant levels in resident and transplanted California mussels from coastal, bay and estuarine areas.

State Revolving Fund (SRF):
This program, capitalized in part by federal funds, provides low-interest loans for construction of publicly owned wastewater treatment and water recycling facilities, for implementation of nonpoint source and storm drainage pollution control management programs, and for the development and implementation of estuary conservation and management programs.

State Water Project:
A water and power development and conveyance system operated by the California Department of Water Resources, that includes Oroville Dam on the Feather River and California Aqueduct.

State Water Resources Control Board:
Formal name of the State Water Board on first reference, or the California Water Boards when referring to the State and regional boards in non-formal cases.

Static water depth:
The vertical distance from the centerline of the pump discharge down to the surface level of the free pool while no water is being drawn from the pool or water table.

Static water level:
1. Elevation or level of the water table in a well when the pump is not operating; 2. The level or elevation to which water would rise in a tube connected to an artesian aquifer or basin in a conduit under pressure.

Steady-state mass balance:
The mathematical concept that the sum of upstream pollutant loads, each determined by the product of their concentration times flow, equals a resultant downstream load after mixing.

Stockpond:
A pond, having a capacity of 10-acre feet or less, used primarily for watering livestock.

STORET:
A national U. S. EPA computerized data base (Storage and Retrieval) containing both surface and groundwater chemistry data; http://www.epa.gov/storet

Separate Storm sewer System:
A system of pipes (separated from sanitary sewers) that carries water runoff from buildings and land surfaces.

Storm water:
The storm water runoff, and snow melt runoff that is regulated as a point source under the Clean Water Act.

Subsidence:
Sinking of the land surface due to a number of factors; e.g., groundwater extraction.

Supercritical water:
A type of thermal treatment using moderate temperatures and high pressures to enhance the ability of water to break down large organic molecules into smaller, less toxic ones. Oxygen injected during this process combines with simple organic compounds to form carbon dioxide and water.

Superfund Innovative Technology Evaluation Program (SITE):
U.S. EPA program to promote development and use of innovative treatment and site characterization technologies in Superfund site cleanups.

Superfund:
The federal program operated under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization (SARA) that funds and carries out U.S. EPA's solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites to include on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Supplier of water:
Any person who owns or operates a public water supply.

Surface impoundment:
Treatment, storage or disposal of liquid hazardous wastes in ponds.

Surface runoff:
(See Runoff).

Surface water:
All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.).

Suspended loads:
Specific sediment particles maintained in the water column by turbulence and carried with the flow of water.

Suspended solids:
The small solid particles in water that cause turbidity. Particles of suspended sediment tend to settle at the channel bottom, but upward currents in turbulent flow counteract gravitational settling.

Swamp:
A type of wetland dominated by woody vegetation but without appreciable peat deposits. Swamps may be fresh or salt water and tidal or non-tidal. (See Wetlands)

Synthetic Organic Chemicals (SOCs):
Man-made (anthropogenic) organic chemicals. Some SOCs are volatile; others tend to stay dissolved in water instead of evaporating.